

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-88 (cancelled)

Claim 89 (previously amended): A filtering system for filtering working fluid from a machine, said system combining a cleanable filter and a centrifuge and transferring a contaminant storage function from said cleanable filter to said centrifuge, said cleanable filter having a filter media element for filtering said working fluid, said cleanable filter  
5 having a first inlet receiving working fluid from said machine, said cleanable filter having a first outlet returning working fluid to said machine, said cleanable filter having a second inlet receiving a cleaning fluid from a source of cleaning fluid, said cleanable filter having a second outlet exhausting said cleaning fluid, said filter media element having a clean side communicating with said first outlet and said second inlet, said filter media  
10 element having a dirty side communicating with said first inlet and said second outlet, said cleanable filter having a first flowpath therethrough from said first inlet through said filter media element in one direction to said first outlet, said cleanable filter having a second flowpath therethrough from said second inlet through said filter media element in the opposite direction to said second outlet, said first and second flowpaths having  
15 common but opposite direction portions through said filter media element, said cleanable filter having a filtering mode of operation with said second inlet closed and said second outlet closed and filtering fluid flow therethrough along said first flowpath, said cleanable filter having a backwash mode of operation with said second inlet open and said second outlet open and cleaning fluid flowing therethrough along said second flowpath and  
20 backwashing contaminant-laden working fluid from said dirty side of said filter media element to said second outlet, said centrifuge having an inlet connected to said second

outlet of said cleanable filter and receiving contaminant-laden working fluid therefrom and separating and storing contaminant, said centrifuge comprising a housing having a rotor mounted for rotation therein about an axis, said rotor having an inner cylindrical  
25 sidewall with a hollow interior, and an outer cylindrical sidewall spaced radially outwardly of said inner cylindrical sidewall and defining an annular space therebetween, said inner cylindrical sidewall having a transfer passage therethrough providing communication of said hollow interior with said annular space, said housing having an inlet for admitting contaminant-laden fluid to said hollow interior of said inner cylindrical  
30 sidewall for passing through said transfer passage into said annular space for centrifugal separation upon said rotation, said annular space providing a storage container storing said contaminant, a standpipe circumscribing said inner cylindrical sidewall and dividing said annular space into an inner annular chamber between said standpipe and said inner cylindrical sidewall, and an outer annular chamber between said standpipe and said outer  
35 cylindrical sidewall, wherein said rotor has a base plate extending between said inner and outer cylindrical sidewalls, said rotor base plate has a drain passage communicating with said annular space and effective upon stopping of said rotation to drain fluid therefrom, said standpipe has an upper end at said transfer passage, and has a lower end at said drain passage, and wherein said contaminant-laden fluid comprises contaminant-laden liquid in  
40 a gas stream, and such that during rotation, gas in said gas stream from said transfer passage is vented through said inner annular chamber to said drain passage, and contaminant-laden liquid from said transfer passage is centrifugally propelled into said outer annular chamber.

Claim 90 (original): The invention according to claim 89 comprising high-loft filter media in said outer annular chamber comprising a matrix of filter material of at least 75% void volume, said outer annular chamber providing a storage container storing said contaminant and retaining said contaminant in said high-loft filter media, said high-loft filter media  
5 retaining and storing said separated contaminant in said outer annular chamber, including

after said rotation when said rotor is stopped, said high-loft filter media reducing re-entrainment of said separated contaminant during start-up at the beginning of the next rotation of said rotor.

Claim 91 (original): The invention according to claim 89 wherein said rotor outer cylindrical sidewall is removably separable from said base, and wherein said rotor further comprises a disposable liner shell capsule extending along and lining the interior of said outer cylindrical sidewall and accumulating and containing contaminant, such that said centrifuge may be serviced by removing said outer cylindrical sidewall and discarding said disposable liner shell capsule with contained contaminant therein and replacing same with another disposable liner shell capsule.

Claims 92-94 (canceled)

Claim 95 (currently amended): ~~The invention according to claim 94~~ A filtering system for filtering working fluid from a machine comprising a filter having a filter media element for filtering said working fluid, said filter having a first inlet receiving working fluid from said machine, said filter having a first outlet returning working fluid to said machine, said filter having a second inlet receiving a cleaning fluid from a source of cleaning fluid, said filter having a second outlet exhausting said cleaning fluid, said filter media element having a clean side communicating with said first outlet and said second inlet, said filter media element having a dirty side communicating with said first inlet and said second outlet, said filter having a first flowpath therethrough from said first inlet through said filter media element in one direction to said first outlet, said filter having a second flowpath therethrough from said second inlet through said filter media element in the opposite direction to said second outlet, said first and second flowpaths having common but opposite direction portions through said filter media element, said filter having a filtering mode of operation with said second inlet closed and said second outlet closed and filtering fluid flow

- 15 therethrough along said first flowpath, said filter having a backwash mode of operation with  
said second inlet open and said second outlet open and said cleaning fluid flowing  
therethrough along said second flowpath and backwashing contaminant-laden working fluid  
from said dirty side of said filter media element to said second outlet, a contaminant  
separator having an inlet connected to said second outlet of said filter and receiving and  
20 separating contaminant from said contaminant-laden working fluid, wherein said  
contaminant separator comprises a centrifuge having a rotor separating contaminant from  
working fluid, and a storage container storing said contaminant, wherein said rotor is driven  
to rotate by a motive force, and wherein said motive force and said cleaning fluid are each  
provided by pressurized fluid, namely pressurized drive fluid for said motive force, and  
25 pressurized backflushing fluid for said cleaning fluid, wherein backflushing pressure is  
applied by pressurized backflushing fluid from said second inlet, and wherein said motive  
force is applied by pressurized drive fluid externally of said rotor and externally of said  
storage container, wherein said drive fluid is the same as said backflushing fluid and  
different than said working fluid.

- Claim 96 (currently amended): ~~The invention according to claim 7~~ A filtering system for  
filtering working fluid from a machine comprising a filter having a filter media element for  
filtering said working fluid, said filter having a first inlet receiving working fluid from said  
machine, said filter having a first outlet returning working fluid to said machine, said filter  
5 having a second inlet receiving a cleaning fluid from a source of cleaning fluid, said filter  
having a second outlet exhausting said cleaning fluid, said filter media element having a  
clean side communicating with said first outlet and said second inlet, said filter media  
element having a dirty side communicating with said first inlet and said second outlet, said  
filter having a first flowpath therethrough from said first inlet through said filter media  
10 element in one direction to said first outlet, said filter having a second flowpath therethrough  
from said second inlet through said filter media element in the opposite direction to said  
second outlet, said first and second flowpaths having common but opposite direction  
portions through said filter media element, said filter having a filtering mode of operation

15 with said second inlet closed and said second outlet closed and filtering fluid flow  
therethrough along said first flowpath, said filter having a backwash mode of operation with  
said second inlet open and said second outlet open and said cleaning fluid flowing  
therethrough along said second flowpath and backwashing contaminant-laden working fluid  
from said dirty side of said filter media element to said second outlet, a contaminant  
20 separator having an inlet connected to said second outlet of said filter and receiving and  
separating contaminant from said contaminant-laden working fluid, wherein said  
contaminant separator comprises a centrifuge having a rotor separating contaminant from  
working fluid, and a storage container storing said contaminant, wherein said rotor is driven  
to rotate by a motive force, and wherein said motive force and said cleaning fluid are each  
25 provided by pressurized fluid, namely pressurized drive fluid for said motive force, and  
pressurized backflushing fluid for said cleaning fluid, wherein backflushing pressure is  
applied by pressurized backflushing fluid from said second inlet, and wherein said motive  
force is applied by pressurized drive fluid externally of said rotor and externally of said  
storage container, wherein said rotor has an inner cylindrical sidewall, and an outer  
30 cylindrical sidewall spaced radially outwardly of said inner cylindrical sidewall, and  
comprising an annular space between said inner and outer cylindrical sidewalls and  
providing said storage container, and comprising a turbine on said outer cylindrical sidewall  
and external of said annular space for causing rotation of said rotor in response to  
impingement of said pressurized drive fluid against said turbine.

Claim 97 (currently amended): ~~The invention according to claim 96~~ A filtering system for  
filtering working fluid from a machine comprising a filter having a filter media element for  
filtering said working fluid, said filter having a first inlet receiving working fluid from said  
machine, said filter having a first outlet returning working fluid to said machine, said filter  
5 having a second inlet receiving a cleaning fluid from a source of cleaning fluid, said filter  
having a second outlet exhausting said cleaning fluid, said filter media element having a  
clean side communicating with said first outlet and said second inlet, said filter media  
element having a dirty side communicating with said first inlet and said second outlet, said

filter having a first flowpath therethrough from said first inlet through said filter media  
10 element in one direction to said first outlet, said filter having a second flowpath therethrough  
from said second inlet through said filter media element in the opposite direction to said  
second outlet, said first and second flowpaths having common but opposite direction  
portions through said filter media element, said filter having a filtering mode of operation  
with said second inlet closed and said second outlet closed and filtering fluid flow  
15 therethrough along said first flowpath, said filter having a backwash mode of operation with  
said second inlet open and said second outlet open and said cleaning fluid flowing  
therethrough along said second flowpath and backwashing contaminant-laden working fluid  
from said dirty side of said filter media element to said second outlet, a contaminant  
separator having an inlet connected to said second outlet of said filter and receiving and  
20 separating contaminant from said contaminant-laden working fluid, wherein said  
contaminant separator comprises a centrifuge having a rotor separating contaminant from  
working fluid, and a storage container storing said contaminant, wherein said rotor is driven  
to rotate by a motive force, and wherein said motive force and said cleaning fluid are each  
provided by pressurized fluid, namely pressurized drive fluid for said motive force, and  
25 pressurized backflushing fluid for said cleaning fluid, wherein backflushing pressure is  
applied by pressurized backflushing fluid from said second inlet, and wherein said motive  
force is applied by pressurized drive fluid externally of said rotor and externally of said  
storage container, wherein said rotor has an inner cylindrical sidewall, and an outer  
cylindrical sidewall spaced radially outwardly of said inner cylindrical sidewall, and  
30 comprising an annular space between said inner and outer cylindrical sidewalls and  
providing said storage container, and comprising a turbine on said rotor and external of  
said annular space for causing rotation of said rotor in response to impingement of said  
pressurized drive fluid against said turbine, comprising high-loft filter media in said  
annular space, said high-loft filter media comprising a matrix of filter material of at least  
35 75 % void volume, said matrix of filter material of said high-loft filter media being  
selected from the group consisting of fibrous material, polyester, foam including  
reticulated foam, spun bonded web, wire mesh including stainless steel, and sintered

material including porous composites, and wherein said rotor has a base plate extending between said inner and outer cylindrical sidewalls, said rotor base plate having a drain passage communicating with said annular space and effective upon stopping of rotation of  
40 said rotor to drain fluid therefrom, said rotor base plate having a configured surface facing upwardly toward said annular space and having an upper-height outer portion adjacent said outer cylindrical sidewall, a lower pocket portion, and an intermediate-height inner portion adjacent said inner cylindrical sidewall, said configured surface being  
45 tapered radially inwardly and downwardly from said upper-height outer portion to said lower pocket portion and then upwardly to said intermediate-height inner portion, said upper-height outer portion having a height higher than said intermediate-height inner portion, said intermediate-height inner portion having a height greater than said lower pocket portion, said drain passage being at said intermediate-height inner portion, such  
50 that separated contaminant not retained by said high-loft filter media is collected in said lower pocket portion, and fluid above said collected contaminant in said lower pocket portion drains to said drain passage.

Claim 98 (previously added): The invention according to claim 89 wherein said standpipe has an upper reach at said upper end at a level vertically below said transfer passage.

Claim 99 (previously added): The invention according to claim 98 wherein said standpipe has one or more openings at said lower end draining fluid therethrough from said outer annular chamber to said drain passage upon said stopping of said rotation, wherein said rotor has a base plate extending between said inner and outer cylindrical  
5 sidewalls, said rotor base plate has a configured surface facing said annular space and gravitationally guiding drainage of liquid therefrom to said drain passage upon said stopping of rotation, and wherein said standpipe at said lower end is mounted to said rotor base plate at said configured surface, and wherein said configured surface has an upper-height outer portion adjacent said outer cylindrical sidewall, a lower pocket portion, and

- 10 an intermediate-height inner portion adjacent said inner cylindrical sidewall, said configured surface being tapered radially inwardly and downwardly from said upper-height outer portion to said lower pocket portion and then upwardly to said intermediate-height inner portion, said upper-height outer portion having a height higher than said intermediate-height inner portion, said intermediate-height inner portion having a height
- 15 higher than said lower pocket portion, said drain passage being at said intermediate-height inner portion, such that separated contaminant is collected in said lower pocket portion, and liquid above said collected contaminant in said lower pocket portion drains to said drain passage.